

**PLANNING ASSISTANCE TO STATES (SECTION 22) PROGRAM  
OF THE  
U.S. ARMY CORPS OF ENGINEERS**

The Planning Assistance to States Program is authorized by Section 22 of the 1974 Water Resources Development Act. This program authorizes the Corps to use its technical expertise in management of water and related land resources to help States and Tribes solve water resource problems. Upon request, the Corps of Engineers will cooperate with non-federal public sponsors in the preparation of plans for the development, utilization and conservation of water and related land resources located within the boundaries of the State. Assistance is given within the limits of available appropriations, but \$500,000 is the maximum federal funds available annually to any State or Tribe. A fifty percent cost share is required by the non-federal sponsor. The types of studies available under this program are show below:

**ENVIRONMENTAL PLANNING**

Coastal Salt Marsh Survey  
Marsh Restoration Study  
Fish Restoration  
Fish and Wildlife Studies  
Habitat Computer Modeling  
Hazardous and Toxic Waste Studies  
Natural Resources Database  
Natural Resources Inventory at Reservoirs  
Cultural Resources Studies  
Noxious Weed Study  
Bicycle Transportation Corridor Study  
Recreation Resource Planning  
Reservoir Environmental Site Assessment  
State Recreation Plan  
Wetlands Restoration Management  
Wetlands Delineation and Assessment  
Wetland Treatment of Storm Water Runoff

**FLOOD CONTROL/FLOODPLAIN  
MANAGEMENT**

Analysis of Flooding and Erosion Problems  
Bridge Evaluations  
Canal and Tributaries Erosion Study  
Comprehensive Watershed Plan Data Base  
County Master Drainage Plan  
Flood Damage Assessment Study  
Flood Damage Reduction  
Flood Design Criteria  
Flood Hazard Analysis and Evaluation  
Floodplain-Floodway Evaluations  
Floodplain Mapping Improvements  
Floodplain Database  
Inventory of Flood Protection Facilities and Needs  
Lake Tributaries Flood Damage Assessment  
Levee Investigations  
River and Tributaries Ice Jam Assessment  
River Erosion and Sedimentation Study  
River Channel Improvement Study  
River Flow Augmentation  
River Sedimentation Study  
State Guide to Flood-proofing Alternatives

Geographic Information System (GIS)  
Digitized Floodplain Mapping  
Flood Warnings System  
Topographic and Photogrammetric Survey

**HYDROLOGIC/HYDRAULIC STUDIES**

Channel Capacities for Water Intake  
Backwater Restoration Studies  
Basin Drainage Studies  
Computer Modeling (HEC, NWS, etc)  
Combined Sewer Outfall Studies  
County Flood Hazard Evaluation Study  
County Hydrologic Manual  
Watershed Modeling  
Groundwater Aquifer and Surface Water Survey  
HEC5 Modeling Training Assistance  
Hydrologic Analysis  
Hydrologic Modeling for Nonpoint Source Pollution  
Hydrologic Study for Wildlife Area  
Outlet Operation-Regulation Study  
Retention Basin Studies  
River Basin Floodplain Management Surveys  
River Hydrologic Modeling  
River Management Modeling  
Unsteady Flow Network (UNET) Modeling  
Water Demand and Availability Study  
Water Forecasting for States  
Continuous Simulation Modeling  
Stella Modeling  
Rural Water Supply Study  
Sediment & Water Testing Study  
State Water Management Planning  
Water Quality Baseline Study  
Water Quality Planning  
Water Supply and Demand Study  
Water Supply Evaluation Workshop  
Water Supply Risk Assessment  
Water Supply Study  
Water Use Database Management

### **WATER QUALITY/WATER DEMAND**

Base Flow Reductions  
Water Quality Impacts  
Consumptive Use Analysis  
Public Water Supplies Survey  
River Basin Consumption Use Study  
River Sediment Study

### **WATER RESOURCES MANAGEMENT**

Emergency Response Database  
Emergency Management Resources Database  
Water Resources Project Management Study  
Hurricane Planning Assistance  
Water Resource Planning Reviews

### **COASTAL ZONE PROTECTION**

Coastal Erosion Management Plan  
Coastal Hazard and Tidal Flooding Assessment  
Coastal Structures Inventory  
Offshore Sand Resources for Beach Nourishment  
Sand Management Study  
Seawall Stability Analysis  
Shoreline Erosion/Protection  
State Coastal Zone Management

### **DAM SAFETY/RESERVOIR STUDIES**

Dam Break Analysis  
Reservoir Sedimentation Analysis  
Reservoir Environmental Site Assessment  
Reservoir Investigations

### **HARBOR/PORT PLANNING**

Dredge Material Disposal  
Dredged Material Management Studies  
Dredge Material Placement Studies  
Inventory of Existing Port Facilities  
Breakwater Study  
Statewide Harbor Planning  
Statewide Ports and Harbors Studies  
Wave Measurement Analysis

### **ECONOMIC STUDIES AND ANALYSIS**

Socio-Economic Studies  
Water Resources Evaluations  
    Navigation (deep and shallow draft)  
        Commercial and Recreational  
        Fishing  
        Transportation Model and Cost  
        Analysis  
        Fleet and Commodity Forecasts  
Flood Damage Reduction  
    Floodplain Inventories  
    Depth. of Inundation-Damage  
    Analysis  
    Evaluation of Land Use Patterns  
    for With- and Without- project  
    Conditions  
    Alternative Project Cost  
    Evaluations  
Hydropower Rehabilitation Analysis  
    Alternative Energy Cost Analyses  
    Analysis of Life Cycle  
    Maintenance, Rehabilitation, and  
    Repair Costs  
    Incremental Analysis for  
    Environmental Mitigation and  
    Restoration  
    Water Supply and Water Quality  
    Opportunity Cost Assessment of  
    Pollution Abatement Measures in  
    River Systems  
    Evaluation of Municipal Water  
    Pricing Strategies  
    Agriculture Evaluations  
    Flood Damage Reduction Analysis  
    Recreation Use and Valuation  
    Analysis  
Financial and Market Feasibility Analysis  
Economic Forecasting  
Cost Allocations Studies  
Economic Analysis Techniques  
Benefit-Cost Analysis  
    Incremental Cost Analysis  
    Life Cycle Cost Analysis  
Cost Effectiveness Analysis  
    Risk and Uncertainty Analysis  
    Benefit Maximization